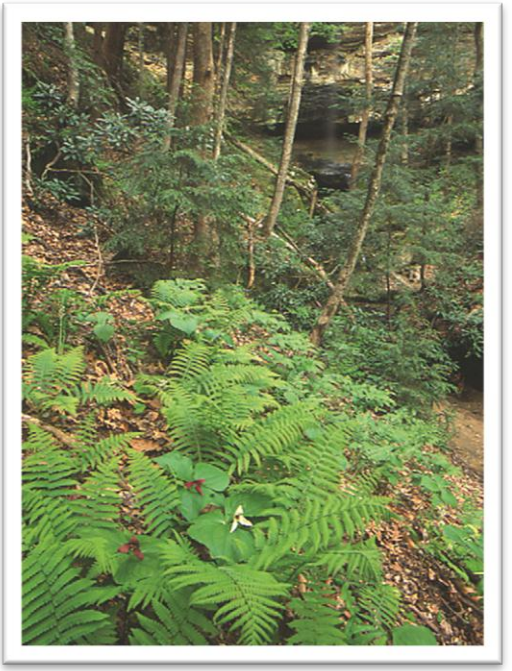
Kentucky
Environmental Quality Commission

Earth Day Awards Ceremony
April 12, 2013

Berry Hill Mansion
700 Louisville Rd.
Frankfort, Ky.



Dog Slaughter Falls near Cumberland Falls State Park
Photograph courtesy of Thomas G. Barnes

The Kentucky Environmental Quality Commission
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EQC is a seven-member citizen advisory board created under state law in 1972. Its mission is to facilitate public dialog on issues, monitor trends and conditions, promote partnerships to improve and protect the environment for future generations. Also, it advises state officials on environmental matters and hosts public awareness, responsibility and positive action toward a healthy environment.

Welcome and Opening Remarks
Arnita Gadson, Executive Director

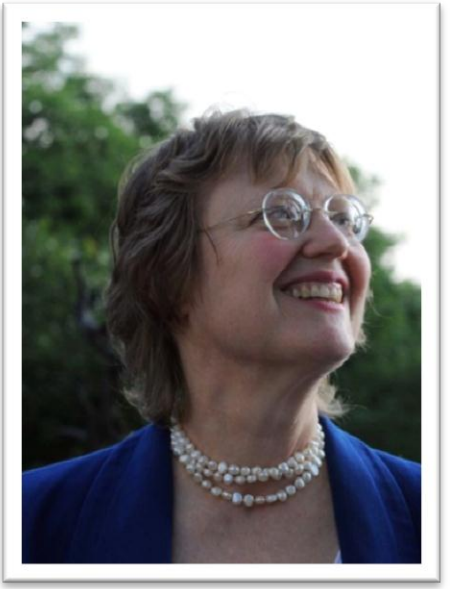
Welcome and Introduction of EQC Commissioners
Dr. Kimberly Sinclair Holmes, Chair

Mark Grisham, Vice Chair, Paducah, Ky.
Tom Herman, Louisville, Ky.
Martha Tarrant, Lexington, Ky.
Steve Coleman, Frankfort, Ky.
Scott R. Smith, Lexington, Ky.
Jason DeLambre, Frankfort, Ky.

Introduction of Kentucky Energy and Environment Cabinet Secretary
Dr. Leonard K. Peters

Introduction of Keynote Speaker
Dr. Leonard K. Peters

Sarah Lynn Cunningham
Kentucky Environmental Quality Commission
Earth Day Speaker 2013



Sarah Lynn Cunningham offers the technical problem-solving abilities of an engineer, the communication skills of an educator, the creativity of an artist and the passion of an advocate.

Cunningham is a licensed, professional environmental engineer and a state-certified environmental educator. She holds two inter-disciplinary degrees from the University of Louisville: a Bachelor of Applied Science in environmental engineering and a Master of Science in environmental education and environmental history.

She is teaching U of L's graduate course in green engineering and sustainable design and will teach its 300-level Introduction to Environmental Engineering course.

She is self-employed (see www.greensmarts.us), after retiring from civil service with the Louisville & Jefferson Co. Metropolitan Sewer District, Jefferson Co. Board of Health and Kentucky Division of Water.

At MSD, she facilitated and coordinated the implementation of the organization's commitment to CERES Principles (Coalition for Environmentally Responsible Economies), including environmental management systems (EMS), environmental auditing, biosolids management, energy efficiency (E2), pollution-prevention (P2), international affairs and public participation with citizen environmental groups. She participated on teams responsible for planning and overseeing construction of capital projects (up to $65 million).

Cunningham has been an environmentalist for nearly 40 years. After being invited to join the international Climate Reality Project in 2007 and licensed by former U.S. Vice President Al Gore to give her localized versions of his *An Inconvenient Truth* (and, later, *Our Choice)*, she co-founded the Louisville Climate Action Network (www.louisvillecan.org) and blogs for The Courier-Journal on climate issues (slc.courier-journal.com).

Cunningham has shared her technical expertise in water quality and public health with governments around the world, including Kiev, Ukraine; Tamale, Ghana; Kanagawa Prefecture, Japan; Phuket, Thailand; and Louisville's Sister Cities.

Presentation of EQC Earth Day Awards
Arnita Gadson, Executive Director
EQC Commissioners and Secretary Peters

The Commonwealth of Kentucky recognizes the following for significant contributions toward environmental stewardship:

Tony Powell

Tony Powell graduated from Northern Kentucky University with a BA in Biology. A stint in the Peace Corps in the Philipines reinforced the need for soil conservation, water pollution prevention and family farming. After moving his family to the Kentucky River basin in the late '90s, being concerned for the welfare of his children, Tony inquired about the safety of the water in Ten Mile Creek.

In 1997, the Powells joined the Kentucky River Watershed Watch and began water sampling in Ten Mile and Eagle Creeks in Grant County. As a past septic systems inspector with the Northern Kentucky Health Department, Tony became concerned about the contributions of failing septic systems to high pathogen levels in the Eagle Creek watershed.

In 2004, Tony received a grant from the Kentucky River Authority, with which he formed the Eagle Creek Watershed Council. This was followed by two U.S. EPA grants resulting in the development of the first official Watershed-Based Plan in Kentucky and an ongoing septic system education and abatement project.

Since 2005, the Northern Kentucky Health Department has been utilizing these funds to operate a cost-share program that repairs or replaces specific failing septic systems. Over 57 problem septic systems have been repaired or replaced in the Ten Mile Creek subwatershed. This work now prevents nearly 3 million gallons of sewage from entering the waters of the Commonwealth.

Eagle Creek was delisted for pathogen contamination in state government's Integrated Report on Water Quality. Under Tony's guidance, a large mobile home community was connected to the Carrollton Sewage Treatment Plant from monies received through a Supplemental Environmental Project (SEP).

Partners include: Northern Kentucky Health Department, Kentucky River Watershed Watch, Kentucky River Authority.

Watershed Watch in Kentucky

Watershed Watch in Kentucky is a statewide volunteer effort that trains citizens to collect water samples from rivers and streams they adopt, in order to measure contaminants.

All volunteers take introductory or Phase I training where they learn the why and how of measuring and recording dissolved oxygen, conductivity, pH, temperature, and other water quality indicators. The volunteers participate in monitoring , collecting samples that are delivered to laboratories for analysis to detect pesticides, *E.coli* bacteria or metals. Some volunteers go a step further, taking advanced or Phase II training where they acquire skills to systematically make observations of other important stream health indicators. The information gathered by Watershed Watch in Kentucky groups provides an extensive database of current water quality information.

There are nine such organizations in Kentucky: Big Sandy Watershed Watch, Four Rivers Watershed Watch, Kentucky River Watershed Watch, Licking

River Watershed Watch, Salt River Watershed Watch, Tradewater Lower Green Watershed Watch, Upper Cumberland Watershed Watch, Upper Green River Watershed Watch.

Since sampling began in 1997, scientific methods for monitoring have become more sophisticated. This shift required labs to alter testing methods and volunteers to learn new terminology. In light of these changes, the statewide Watershed Watch group secured $440,000 to revamp training and training materials. The Kentucky Division of Water pledged $264,174 in federal dollars from the Clean Water Act, Section 319(h). The Watershed Watch organizations, in turn, pledged $176,116 in matching funds, mostly provided from the value of volunteer hours. The grant will provide sampling tools to loan to volunteers.

All volunteers were required to be retrained in order to maximize standardization. About 50 trainers attended updated training sessions for the introductory Phase I and 50 for Phase II. Three-hundred and sixty eight volunteers were trained for Phase I monitoring and 195 for Phase II.

Partners include: Virginia Environmental Endowment, Kentucky Waterways Alliance, Kentucky Division of Water and numerous universities around the state.

River Fields

River Fields, a nonprofit organization with over 2,100 members from 119 zip codes, located in Louisville, Ky., was chartered some 50+ years ago. Its passion and mission is to protect and preserve the natural

and cultural resources and landscape along the Ohio River corridor.

It is a nationally recognized land trust known for its work in education, policy advocacy and land conservation. River Fields' outreach includes wildflower walks and autumn color tours, to help the community understand the importance of land conservation; its link to long-term effects on environmental quality in the preservation of land, air and water. At present, River Fields has preserved 2,200 acres of land through conservation easements.

River Fields has participated in the University of Louisville Urban Studies curriculum, teaching classes in historic preservation. River Fields was also a part of the University of Louisville honor's seminar, "Exploring the Waterways of Jefferson County," in which students paddled and studied local streams and rivers, to learn about the current and future environmental impacts and threats.

River Fields, partnering with the Kentucky Land Trusts, seeks to elevate progress and expertise in land conservation through best management practices; to preserve acres of undeveloped open space to create natural habitats, one of which currently is home to a family of bald eagles. To increase its public outreach, River Fields has expanded public tours by 25 percent.

Executive Director Meme Runyon was recognized in the LTA's quarterly magazine, *Saving Land,* as a 2011 Landslide award winner. The Landslide award is the Cultural Landscape Foundation's (TCLF) annual compendium of significant at-risk parks, gardens, horticultural features and working landscapes. With the theme "The Landscape I Love," the awards

recognized threatened sites and the people working to save them. TCLF recognized River Fields featuring the Wolf Pen Branch Mill Farm in the 2012 calendar year.

Because of the work on the Kentucky/Indiana bridges process and community involvement, a recent settlement award will provide a wide range of commitments that includes assurances of public meetings, open and up-to-date communications on phases of construction, public availability of important permitting information regarding stormwater drainage and management, and preservation efforts of historical structures.

Partners include: Kentucky Land Trusts Coalition, Preservation Louisville, Neighborhood Planning and Preservation, Coalition for the Advancement of Regional Transportation, Metropolitan Housing Coalition, Bluegrass Conservancy, Center for Neighborhoods, the Corporate Network for Sustainability, Land Trust Alliance, American Society for Landscape Architects, Environmental Defense Fund, the Nature Conservancy, Sierra Club, the National Trust for Historic Preservation and The Cultural Landscape Foundation, Federal Highway Administration, Kentucky Transportation Cabinet, Indiana Department of Transportation and Coalition for the Advancement of Regional Transportation.

Steve Coleman

As a soil scientist and administrator in the state's Division of Conservation, Steve Coleman devoted his career to conserving prime farm land and improving water quality statewide. With programs such as The Kentucky Soil Erosion and Water Quality Cost Share

program, landowners were made aware of how to preserve nutrients in the soil and reduce harmful runoff.

In a distinguished 37-year career with state government, he promoted best management practices such as rotational grazing, cover crops, vegetative filter strips, streambank stabilization and sinkhole protection. These definitive guidelines have significantly improved the protection of streams, rivers and groundwater.

Coleman also helped to pursue and implement the Agriculture Water Quality Act, which requires landowners with 10 or more acres in use for agriculture or silviculture to develop and implement a water quality plan.

By way of these programs, Coleman has been an outstanding ambassador for Kentucky conservation programs on a national level, the evidence of which is that other states have copied the techniques and programs he introduced, including an equipment loan program and an agriculture district program.

A Direct Aid program originated by Coleman became a critical resource for local conservation districts to provide part-time or full-time technical and administrative positions.

To reduce silt, sediment, nutrients and pesticides from farms from entering the environmentally sensitive Green River and Mammoth Cave system, Coleman directed a Green River Conservation Reserve Enhancement Program (CREP). This has been a successful partnership among Western Kentucky University and state and federal governments that helped landowners in 14 south

central counties protect 100,000 acres of land around the Green River. The project garnered the U.S. Department of Agriculture's highest honor.

Coleman implemented the Mississippi River Basin Initiative a project designed to reduce the level of agricultural nutrients going into the Mississippi River. Over the four-year lifespan of the projects, incentive payments totaling $25.5 million will be awarded to Kentucky landowners.

Partners include: Kentucky Division of Conservation, Kentucky Division of Forestry, Kentucky Association of Conservation Districts, the National Association of State Conservation Agencies, the Soil and Water Conservation Society, the Purchase of Agricultural Conservation Easement Corporation, The Nature Conservancy, Kentucky Department of Fish and Wildlife Resources, Western Kentucky University, Kentucky Division of Water, Kentucky Soil and Water Conservation Commission, Mammoth Cave National Park, the Office of the Governor, the U.S. Department of Agriculture through the Farm Service Agency and the Natural Resources Conservation Service.

DuPont Louisville Works

DuPont innovations serves markets as diverse as agriculture, nutrition, electronics and communications, safety and protection, home and construction, transportation and apparel.

DuPont Louisville Works is the largest producer of Freon 22 in North America. In the process of manufacturing that product, a greenhouse gas called HFC-23 is emitted. Decision makers at the company

set out to mitigate the effects by lowering HFC-23 emissions.

They did so in two ways; the primary method was to make the plant more efficient by producing less greenhouse gas per ton of product as part of the manufacturing process. The second method was to improve equipment reliability in order to ensure the capture of as much HFC-23 as possible.

Personnel at the plant took responsibility for the effort, and the product-to-pollution ratio was lowered by 43 percent. This improvement represents a reduction equal to more than 2 million metric tons of carbon dioxide. This is equivalent to:

- Taking over 400,000 passenger vehicles off the road
- The amount of carbon dioxide sequestered annually by 1.6 million acres of average U.S. forest land
- Eliminating the burning of more than 8,500 railcars of coal

The reduction of HFC-23 emissions represents a benefit to the environment because of the compound's high Global Warming Potential. DuPont Louisville Works considers the 43 percent reduction in carbon dioxide emissions a sustainable practice at this location. New improvement designs have begun to reduce HFC-23 emissions an additional 70% by the year 2015.

Partners include: Rubbertown Community Advisory Council, West Jefferson County Community Task Force, Kentucky Association of Manufacturers, Louisville Chemistry Partnership, Greater Louisville, Inc. and Chemical Industrial Council.

Smithfield Middlesboro

To increase recycling from 2 tons per month to 37 tons per month requires much effort, but that is what the packing plant in Smithfield, Kentucky decided to do.

The environmental management team at Smithfield Middlesboro collaborates quarterly to plan, implement, review, and sustain environmental projects. The team has four corporate objectives and two plant-wide objectives annually. One of the top objectives is reducing waste to the landfill.

Toward this end, employees recycled smoke wood chips, large sheets of plastic that comes in on pallets received, brown paper towels, cardboard cores and ingredient bag paper, office paper and magazines, household batteries, electronic waste and plastic stripping.

To achieve this, trash bins were converted into recycling bins and the plant's sanitation crew assumed the mantle of a sustainability crew. The entire Smithfield Middlesboro workforce was mobilized to add value to the effort and included in all discussions. A strong partnership with local recycling vendors became even stronger as success grew. Progress was measured in the number of tons of materials recycled monthly and results grew from two tons to 37 tons over the period of one year.

Middlesboro Smithfield is also 14001 certified, an internationally recognized standard for the environmental management of business.

Partners include: Bell County Recycling, Robbins Recycling and Heavy's Recycling.

The Green Society at Kentucky State University

One year students at Kentucky State University worked to remove 48,000 pounds of electronic waste from campus. They did so under the flag of The Green Society at KSU, a student environmental club composed of science majors.

The group focuses on ways to make Kentucky State University more sustainable. Its Earth Day activities include:

- A recycle-a-thon competition in which student groups submitted recyclable items to compete to win prizes
- A fashion show featuring clothing made of recycled materials
- A Cell phone and battery recycling program
- Campus clean-ups
- An Environmental art contest
- Tree planting events
- Campus recycling motto and logo contests
- Logo and motto contest for T-shirts and recycling bins

The Green Society at KSU is a chapter of the Ecological Society of America's SEEDS program, and participates in the Adopt-a-Stream program at Forks of the Elkhorn through the oversight of the Kentucky Fish and Wildlife Service.

Students conducted a community survey on knowledge about water quality and resources as part of an effort by KSU's College of Agriculture, Food Sciences and Sustainable Systems to become a Groundwater Guardian community.

One of the society's campus clean-up focuses on sweeping up the football stadium and cleaning up

trash immediately following KSU's annual Homecoming game.

Service projects with local groups include creating community gardens, a geocache activity involving invasive species, and ecosystem activities with local schools.

Along the way, students learn the implications of pollution on human health; how to collaborate with governmental agencies, private businesses and non-profit organizations to boost environmental awareness; and how to network with these groups for future opportunities or employment.

LIFETIME ACHIEVEMENT AWARD

Lee Andrews

Freshwater mussels and Indiana bats are beneficiaries of the work of Lee Andrews, but his out-of-the-box thinking is also credited with developing landmark agreements that have precluded the need to list four Kentucky species as endangered under the Endangered Species Act.

These actions have reduced the regulatory burden of potentially affected industries in Kentucky, which include agriculture and limestone mining, while promoting conservation of these species and providing management flexibility for private landowners and Mammoth Cave National Park.

Andrews created two conservation funds that are credited with a number of major milestones for conversation in Kentucky. The first is the Kentucky Aquatic Resources fund, which aggregates and

directs funding to priority aquatic needs. KARF, in turn, has underwritten the Kentucky Department of Fish and Wildlife Resources' Center for Mollusk Conservation in Frankfort.

The facility is now an international leader in freshwater mussel propagation and management; techniques include in-stream habitat restoration and fish passage projects, water quality and toxicity studies.

The second, the Indiana Bat Conservation Fund is a non-profit which focuses on concerns associated with the federally endangered Indiana bat. Since its inception in 2008, the IBCF has helped acquire nearly 7,000 acres of conservation lands in the Commonwealth, including lands now owned and managed by state land management agencies (e.g. KSNPC), the Clarks River National Wildlife Refuge and several conservation land trusts.

IBCF has also underwritten the installation of gates at Carter Caves State Park, forest habitat improvement projects at Fort Knox and monitoring and research associated with white-nose syndrome, a disease that is fatal to bats.

Lee spearheaded efforts to recover the endangered Shorts goldenrod through acquisition and management of existing populations and the re-introduction of the species to suitable but unoccupied habitat in the Licking River basin.

Lee's work and commitment gives credence to his dedication to protect critical habitat and rare species, land management and conservation.

Partners include: The Nature Conservancy, the University of Louisville Stream Institute, Kentucky

Waterways Alliance, the Kentucky Transportation Cabinet, Kentucky State Nature Preserves Commission, Kentucky Department of Fish and Wildlife Resources, Kentucky Natural Lands Trust, National Resources Conservation Service, Southern Conservation Corp. conservation districts.

PUBLIC SERVICE AWARD

Berea Solar Farm

The only community solar farm in the state of Kentucky is a large single solar electric installation on the Berea Municipal Utilities property. It is owned and managed by the utility, but individuals may lease individual photo-voltaic solar panels and the power generated by their leased panels is credited back to their own individual utility bills.

When the offer was first proposed, the community responded enthusiastically, leasing all available panels within 5 days. This led to an additional 60 panels, which led to an expansion of 132 more. The panels are generating solar energy as they should and credits are flowing back to lease customers and reducing their utility bills.

The project has met and exceeded its original goals, which were to reduce carbon emissions, to boost energy flexibility in Berea, to keep money in Berea that would otherwise flow out of the city to pay for electricity bought from the Berea Municipal Utility's wholesale supplier. The community aspect of the project enables Berea Municipal Utilities to install a solar electric facility at largely no cost by enlisting

the community to participate and reap the benefits through solar leases.

While the project was never sold on the basis of reducing overall utility costs to customers, it appears that over the lease period, customers will roughly break even on their investments. This will occur due to the reductions in their bills for the duration of the lease period. It will approximately equal the cost of the 25-year lease.

Other advantages:

- The project combines the benefits of economies of scale and professional management with the benefits of individual ownership and private earnings.
- Individuals who can't afford the expense of a single solar installation can still realize the benefits of leasing a small portion of a commercial sized system.
- Also, customers who lack property well suited for solar installations can still realize its benefits.
- Individuals who may not even be Berea Utilities customers but who want to support a facility which is a Berea Utilities customer can lease a panel or panels and donate the energy credits to a church, school or other organization.

Berea Municipal Utilities has created a new model for installing and operating solar facilities in the state of Kentucky and one that can be emulated.

Congratulations to all of our winners.

Closing Remarks
Arnita Gadson, Executive Director

Pictures and reception
immediately following the program

Nominations for 2014 Earth Day Awards recognizing environmental stewardship

The annual awards are presented to individuals and institutions who have demonstrated deep concern or activism on behalf of the environment. Citizens and organizations statewide are encouraged to submit names of champions of clean air, clean water, pollution control and other elements vital to healthy ecosystems. Honors will be bestowed in celebration of Earth Day in April 2014.

Nomination forms for EQC's Earth Day Awards can be found on the web at http://eqc.ky.gov or by calling Janet Pinkston at 502-564-2674 or e-mailing Janet.Pinkston@ky.gov

Nomination forms can be sent electronically or by mail to:

Environmental Quality Commission
Energy and Environment Cabinet
500 Mero St.
12th floor, Capital Plaza Tower
Frankfort, KY 40601